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#### **AUTHORITY**

AGO D/A ltr 29 Apr 1980; AGO D/A ltr 29 Apr 1980

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#### DEPARTMENT OF THE ARMY OFFICE OF THE ADJUTANT GENERAL WASHINGTON, D.C. 20310

AGAM-P (M) FOR OT RD-670621

11 January 1968

386664

Operational Report - Lessons Learned, Headquarters, 223d

Combat Support Aviation Battalion, Period Ending 31 July 1967

TO:

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2. Information contained in this report is provided to insure appropriate benefits in the future from Lessons Learned during current operations, and may be adapted for use in developing training material.

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meth G. Neickham KENNETH G. WICKHAM Major General, USA

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DEPARTMENT OF THE ARM
HEADQUARTERS, 223D CONTAIT SUPPORT AVIATION BATTALION
APO San Francisco 96236

W. CD-DE

12 August 1967

SUBJECT: Operational Report for Quarterly Period 31 July 1967 (RCS CSFCR-65)

TO:

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SECTION I Significant Organizational Activities

#### 1. (U) General:

a. The 223d Combat Support Aviation Battalion, arom 1 Mag through 31 July 1967 (with the assets of eight aviation communies), continued its support of combat operations to W Forces, Free World Elitary Assistance Forces, and ARVII Forces. During this reporting period there was continued improvement of facilities at Battalion Headquarters. Construction of a new Battalion Headquarters building on the east side of Qui Whon Army Airfield is being accomplished through the self help improvement program. The new facilities, which will house all starf sections, will eliminate the present problem area of staff sections being widely separated on the airfield due to shortage of space. This arrangement will result in improved and closer staff coordination and eliminate loss of time and manyover due to travel time and distance to present staff locations. The newly designated area presently billets the battalion's officers and contimued improvements are being accomplished and will continue throughout the next reporting period. The new battelion headquarters is norming correlation with a projected completion date of 12 August 1967.

b. (U) The Battalion published a Pocket Guide for Visual Reconnaissance (VR) and a Visual Reconnaissance Manual. Both of these publications were derived from experience gained in the past by the Reconnaissance Airplane Companies. The information was consolidated and published to be used as a guide in the conduct of visual reconnaissance missions. The pocket guides and runuals have been distributed to each Reconnaissance Airplane Company and an adequate number are being held by battalion in order that they can be distributed to each new avalator as he arrives in-country. The product was the result of much work on the part of representatives from the units and the Buttalion S-3. Copies of the guides are attached as inclosure 1 & 2.

FOR OT R9

Downgraded at 8 year Intervals
Declassified after 18 years
DOD DIR 5200.10

- c. (C) The 212th Combat Support Aviation Battalion advance party arrived in RVN on 24 July 1967. The advance party was followed by the main body which arrived in Da Hang on 30 July 1967. The advance party, after being briefed by the 17th Group and then 223d Aviation Battalion, proceeded to its operational site at Marble Countain Carine Air Facility in Da Nang. The Battalion is composed of twenty three officers and eighty-six enlisted men. Once the battalion becomes operational it will inherit control of the 202d Aviation Company, 220th Aviation Company, and the 131st Aviation Company, which at the present time are part of the 223d Combat Support Aviation Battalion. A request for a construction directive for the 212th Combat Aviation Battalion was initiated by the Da Nang Sub Area Command duringApril 1967, but was not returned prior to the unit's arrival in country. The inability to secure a construction directive prior to the arrival of the unit caused a delay in the initiation of the unit's building program. It is felt a construction directive should be requested and approved before the unit's arrival in country in order to facilitate the start of construction at the earliest date possible.
- d. (C) The 220th Reconnaissance Aviation Company saw enemy activity substantially increased in the I Corps Area. A definite increase in intensity of fire against 0-1 aircraft was seen with the employment of 37mm, 87mm, and SAM missiles near the DMZ. This action indicates the effectiveness of the O-l Aircraft since the Forth Vietnamese went to great lengths to keep these aircraft out of the Diz as they moved new units in. Prequent and heavy bombardment of the Dong Ha Airfield necessitated temporary evacuation of the 4th platoon from that location during the period 4 July through 9 July 1967. Attacks by Yorth Vietnamese regulars in the Quang Tri Province were characterized by artillery fired from the vicinity of the DAZ, use of 120mm and 140mm rockets, frequent mortar attacks against Gia Linh and Con Thien, and "human wave" attacks against IIS Marine forces south of the DMZ. The MACV compound in Hue withstood two mortar attacks early in the quarter, however, no injuries were sustained by the personnel of the 220th. On 14 July, the Da Mang Main Airfield suffered extensive damage from a rocket attack. These events mark the more significant indications of stepped-up enemy activity in the I Corps Area and demonstrated his capability to attack at his own choosing, time, and place. The 220th Aviation Company, during the reporting period, participated in thirty-six major Marine and ARVII Operations.

Extensive improvements to the company head cuarters compound at Hue Phu Bai were completed or initiated during the period. The unit mess and recreation facilities were renovated and extended, bunkers within the compound have been reconstructed and consist of the underground with overhead cover typs. The aircraft revetment program is ninety percent complete. A series of articles were written by hr. Charlie Black of the Columbus Georgia Enquirer about the 220th Aviation Company.

These articles were published by several other syndicated newspapers and told the story of the unit's actions and contributions in the Asau Valley, and of actions with the Marines. On 28 June 1967, Colonel Gust, Deputy Brigade Commander, 1st eviation Brigade, visited the C20th Aviation Company. He was very impressed with the units combat observation and operational capability.

- e. (C) During the past quarter, the 219th Reconnaissance Airplane Company continued its mission of visual reconnaissance of the northern half of the II Corps Area. In conjunction with the mission, the company supported such operations as the 4th Division's "Francis Marion", the 173d Airborne Brigade's "Operation Greeley" and the 5th Special Forces "Operation Omega". In addition, the company conducted a two-week ARVN aerial observer school and a one week aerial observer school for the 4th Infantry Division. A test and evaluation was made of the Decca navigation system installed in the O-1 Aircraft (See Section II, Commanders Observation and Recommendations).
- f. (C) During this period, the 183d Reconnaissance Airplane Company continued to perform its visual reconnaissance mission for the entire southern half of the II Corp tactical zone. Elements of the company are permanently stationed at eight different locations in an area which encompasses some 24,000 square miles of jungle, mountains, and coastal plains. In addition to its normal mission this company has provided general support aircraft to the following:
- (1) "Task Force Oregon": During the reporting period four aircraft were stationed at Cau Lai in support of this Task Force.
- (2) U.S. Special Forces Recondo School at Tha Trang on an On-Call basis.
- (3) U.S. Navy Coastal Surveillance Center for coastal observation between Tuy Hoa and Phan Thiet.

The Four airplane section in support of "Task Force Oregon" has increased appreciably the artillery Battalion's ratio of observed to non-observed fires.

Through the concentrated efforts of all members of the company, many improvements were made throughout the 133d company area to provide efficient working facilities, better security and more comfortable living conditions. Some of the improvements accomplished were comstruction of a unit day room, improvements in the mess hall and reveting of troop billets. A new aircraft parking ramp was completed during the month of July by the 14th Combat Engineer Battalion. Company Operations is now located in the only building on the ramp; however, in the near future a new aircraft maintenance hanger and technical supply building will be constructed on the ramp, thus increasing the efficiency of operations. The perimeter of defense of the 133d Company has been strengthened around the company contonement area with the assistance of the 18th Engineer Brigade. A double apron fence and guard tower were constructed, additional concertina wire emplaced and trip flares installed on the perimeter fence. Claymore mines have been requested for inclusion in the defense plan.

- g. (C) The 282d Aviation Company continued to provide helicopter support to the I Corps Advisory effort and combat operations conducted by the 1st and 2d ARVI! Divisions. The unit presently keeps three UH-10's at Quang Ngai under the operational control of the Senior Advisor, Advisory Team 2, and three UN-10's at Hus Citadel under the operational control of the Senior Advisor, Advisory Team 3. The company minus is employed from Marble Mountain Marine Air Facility, Da Wang, in support of I Corps headquarters, and to augment the sections at Hue Citadel and Quang Ngai when necessary. The 282d Aviation Company participated in three search and destroy operations conducted by the 2d ARM Division in Quang Mgai Province by airlifting the blocking forces. On 8 July 1967, the unit was scrambled to airlift a battelion from the 1st ARVN Division in Hue, RVN. The mission of the battalion was to attack a known NVA battalion located in the vicinity of Hue. The NVA battalion in withdrawing from its last defensive position made contact with the ARVN battalion in the PZ. The 282d gunships were brought to bear with excellent results on the disorganized enemy. Since the organization of the armed platoon in March 1967, considerable success has been achieved in combat operations with the 1st and 2d ARVN divisions. To date over three hundred confirmed enemy kills have been credited to the "Alley Cats" of the 232d Aviation Company.
- h. (C) The 196th Aviation Company was relieved from assignment to the 14th Combat Aviation Battalion. The unit was attached to the 17th Combat Aviation Group for operations and to the 223d Combat Aviation Battalion for administration and personnel. On 25 April 1967, the unit was released from supporting the 3d Brigade, 25th Infantry Division and aircraft were reallocated. The unit then committed five aircraft to support the ARVN in the 1st Air Cavalry Division Area of operations, three aircraft to the Capital ROK Infantry Division, and one aircraft in general support of the coastal area. Again in July the aircraft commitment changed, making it necessary to base four aircraft in Fleiku in general support of the 52d Combat Aviation Battalion. One Aircraft was allocated to the Capital ROK Infantry Division; one aircraft for support of ARVE, and three aircraft in general support of the coastal area. The 196th Aviation Company has provided support as far south as Saigon, North to Da Nang, West to Pleiku, and throughout the coastal area. The unit has supported the 1st Air Cavelry Division, the 101st Airborne Division, the 3d Brigade, 25th Infantry Division, the Capital ROK Infantry Division, the White Horse Infantry Division (ROK), and numerous other smaller tactical and support units. On 9 July 1967, the 196th Aviation Company participated in a Joint Korean Division Operation. Seven aircraft were committed and flew a total of 63.5 hours in support of the operation. During the course of the operation a total of 268 tons of cargo and 396 Combat Troops were transported. This operation was very effective as a result of the excellent cooperation among the Free World Forces.

i. (C) The 131st Surveillance Aviation Company has continued working under the operational control of MAGV J-2 for visual reconnaissance, side-looking airborne radar and infrared missions. The VR missions were flown in the Migerhound/Steel Tiger South Area of Operations. A total of two hundred seventeen missions were recuested with one hundred eighty-six of these flown. SLAR missions were flown in the Steel Tiger South, Rolling Thunder and Malley Ho areas of operations. There were eight hundred nine missions flown of nine hundred seventy-eight requested. During the entire reporting period, SLAR aircraft have flown "Tag-on" missions in the local area to provide intelligence to the Third larine Division which is responsible for the security of the Phu Bai area. Any targets found in the local area by BLAR aircraft while they are emroute to their regular assigned missions are passed on to the Erines. There were forty-seven IR missions flown in the Steel Tiger South Area of one hundred thirteen requested. On 16 June 1967, IR mission requests were discontinued by MACV J-2. The rainy weather and low ceilings in the mission area at night precluded successful use of the infrared system. When the monsoon shifts this fall the IR missions should begin again.

During the reporting period there have been only two hits on VR aircraft compared to sixteen hits during the previous quarter. This reduction in number of hits has been accomplished by raising the normal reconnaissance altitude from 1500 feet to 2500 feet. Although some intelligence is lost due to this higher altitude it is not significant enough to off set the high rate of hits at lower altitudes. Thereas formerly missions were cancelled while aircraft battle damage was remained, there have been no missions cancelled for this reason

during the ast quarter.

The AN/APR-25 and AN/APR-26 ECH equipment was installed on seven OV-1B's (SIAR). Use of this equipment has been successful both as a warning and intelligence gathering devise. The two major problems experienced with this equipment has been the interference of the transponder, Tacan and SLAR System, and the fingility of the Rayclad (#D-132-05) Splices (See Section II, part I,pr 6c). The transponder, Tacan and SIAR interference problems, caused by the blanking box, is being worked on by Grumman Aircraft Corporation. In lieu of the Rayclad Connectors, Betts Splices were used successfully; an EIR has been submitted. Communications with the Air Force and Havy, has been a major problem area. The mission implementing instructions, SAM OB and daily code word list has continually arrived late. The information needed for each day's operation has mostly been obtained by calling TACC, Da Nang. Since the information must be encoded over the phone and then decoded again there is much time lost. Some information needed is so lengthy and/or classified it cannot be obtained over the phone. Often there is insufficient time for mission planning. The importance of obtaining current SA-2 (Surface to Air Hissile) OB can be readily realized.

Outgoing intelligence is hampered in the same manner. At the earliest, intelligence information is recieved by the user elements in Saigon two days after the message is initiated in Phu Bai. Usually it takes four to five days and many times over a week for intelligence messages to reach the agencies in Saigon.

A half-duplex, sole-user teletype line from the unit to the Long Binh Communications Center near Saigon has been installed and is fully operational. However, a helf-duplex circuit cannot handle the large amount of traffic that is required of this unit. A request for a full-duplex circuit upgraded to one hundred wym is being submitted to solve the communications problem.

- j. (C) The 225th Surveillance Aviation Company which became operational on 19 June 1967, has begun making a significant contribution to the overall intelligence collection in RVN. Through the direction of 1st Field Force Vietnam G-2, the unit has flown two hundred thirty eight sorties and four hundred eighty-seven hours since becoming operational. The company, which arrived in country on 28 April 1967, is permanently located at Phu Hiep. At the present time, an extensive building program is underway to complete the contonement area and aircraft facilities.
- k. (C) The 18th Aviation Company (Air MBL FW) continued to support all corp areas in RVM and MAAG THAI, Thailand, with two flight platoons located at Da Mang and Pleiku, one provisional flight platoon at Wha Trang and one located at Qui Nhon. The primary emphasis has been on aircraft maintenance. The maintenance has steadily improved and the average availability of aircraft has been eighty-one percent. Secondary emphasis has been on building programs consisting of construction of an adequate BOQ for the company officers, complete remodeling of the mess hall and completion of a new bunker program. Completion of the BOQ's was accomplished om 10 June 1967. The remodeling of the mess hall, which serves not only the 18th Aviation Company, but also HHD, 223d Aviation Battalion, 256th Transportation Detachment, 163d Medical Detachment and attached members of the 125th ATC, is still underway with notable progress. The defensive posture of the company has been greatly improved with the completion of the bunker grogram.

The company during this period flew a total of seventy-five days in support of Project Delta, supported JUSPAO in the "OPEN ARMS" pregram with daily leaflet drops, and also flew in support of operation Induce with no known results at this time. This flying support is in addition to the units normal mission.

1. (C) The 185th Reconnaissance Airplane Company arrived in the Republic of Vietnam by surface vessel at Cam Ranh Bay on 29 June 1967. The unit was preceded by the advance party which arrived by air carrier at Bien Hoa on 23 June 1967. It's aircraft were transported by surface vessel which arrived at Vung Tan en 20 June 1967. The aircraft were im ediately off loaded and the task of reassembling was completed on 12 July 1967. The aircraft were then ferried to the company's staging area located at Dong Ba Thin.

The advance party and main body were welcomed in country by the 223d Combat Aviation Battalion Commander, Lieutemant Colonel John H. Richardson. On 25 June 1967 LEC Richardson transported the advance party to Dong Ba Thin, which had been obtained by the 223d Battalion as a staging area for the 185th pending complete closure of the unit in country. The staging at Dong Ba Thin consisted of drawing items of supply, establishing unit support accounts, associatly and organization of the unit's organic vehicles and the securing of two hundred thirty (230) tons of VABTOC and TOLE equipment which arrived aboard the Baylor Victory.

A comprehensive in-country flight check and proficiency firing of 2.75" rockets for all aviators was conducted and supervised by instructor pilots from the 183d Reconnaissance Airplane Company in accordance with prescribed visual reconnaissance training techniques

and procedures.

The movement of the unit to its permanent location at Ban Me Thout encountered several unforseen delays due to the inability to acquire a convoy security force. Construction of the cantonement area fell behind the projected time schedule due to weather and movement delays of essential material and supplies which had to be transported to Ban Me Thout by air. As this reporting period ended, the 185th Reconnaissance Airplane Company closed into its in-country location and no future delays in attaining operational status are anticipated.

#### 2. (C) Entelligence and Counter Intelligence

- a. Visual Reconnaissance sightings continue to be the main source of raw intelligence data in the two Corps zones covered. Repetitive observation of an area by the same pilot/observer team continues to be the most productive VR concept. During the quarter, the Reconnaissance Airplane units of the II Corps accounted for 65-70% of the total information collection efforts. Further, approximately 50% of all targets engaged by artillery or air strikes were initially discovered through visual reconnaissance efforts. The slightly lower visual reconnaissance percentages are attributed to the DEROS problem: loss of experienced aviators being replaced by new aviators. It is anticipated that the new arrivals as they gain experience will produce visual reconnaissance results equal to or better than past results.
- b. Continued emphasis has t and on the requirement of furnishing qualified aerial observers for the econhaissance Airplane Companies. The value of this requirement is preciated throughout 1 provinces. The northern provinces recently completed training for several observers.
- c. The Battalion is continuing to encounter difficulty with personnel assigned to positions requiring security clearances but arriving in-country without records in their possession. The problem is greatly magnified when the individual is released to the Aviation Companies due to great distances involved bewteen battalion headquarters and the companies.

- d. Numerous air crew members are arriving in country without required photographs. Once the individual is assigned to a company it is most difficult due to distance and lack of time when utilizing borrowed equipment. Photographic equipment has been requisitioned, though not received. This discrepancy has been brought to the attention of higher headquarters.
  - 3. (C) Operations and Training Activities:
    - a. Plans: None
- b. Operations: The 223d Combat Support Aviation Battalion flew a total of 46, 617 sorties and 32,157 hours in support of operations in Vietnam from 1 May 31 July 1967. The 0-1 companies flew 13,719 sorties and a total of 18, 153 hours in support of visual reconnaissance program in the I & II Corps tactical zones. Battalion OV-1 aircraft flew 1,472 sorties and 3,377 hours in support of J-2 MACV. Also during this period a total of 75,592 passengers were air lifted.
- c. Training: 210 hours of mandatory training were conducted covering subjects required by Battalion TC 350-1. This training is conducted at company, platoon or sector level as necessitated by tactical deployment.
  - 4. (U) Logistics: (See Section II, Part I, Para 5, Logistics).
  - 5. (U) Civil Affairs: None
  - 6. (C) Personnel
- a. During the reporting period the battalion suffered twenty-five (25) casualties which resulted in four (4) fatalities.
  - b. Command Changes
- (1) Major Arthur Dimsdle assumed command of the 196th Aviation Company vice Major James E. Martin on 20 June 1967.
- (2) Major Ralph L. Godwin relinguished command of the 183d Reconnaissance Aviation Company to Major William R. Benoit on 18 June 1967.
- (3) On 25 June 1967 Major James A. Hay assumed command of the 131st Surveillance Airplane Company from Major A.A. Manieri.
- c. ajor 'illiam F. Sullivan of the 232d Aviation Company received the Legion of Terit for his outstanding service as Company Commander.
- d. The following is a list of authorized and assigned strength of the 223d Combat Support Aviation Battalion on 31 July 1967.

13	OF	31	JULY	1967
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18th	15	38	120	174	<b>1</b> 1	16	97	127	10	16	87	113		
256th	1.	1	50	52	1	0	37	38	1	0	31	32		
<b>163</b> a	ï	0	9	10	1	0	10	11	1	0	10	11	7	
183d	<b>3</b> 2	1	95	123	21	3	98	122	21	3	96	120		
219th	41	1	114	156	23	7	103	133	23	7	98	128		
131st	37	3	256	296	25	1	259	285	23	1	227	251		
220th	抑	1	114	156	18	6	83	107	17	6	78	101		
231st	1	0	9	10	0	0	7	7	0	0	7	7		
134th	1	0	9	10	2	0	10	12	. 2	0	10	12		
343 <b>a</b>	3	0	26	29	3	0	24	27	3	0	23	26		
196th	13	25	148	186	10	12	1115	164	10	10	134	154		
610th	1	1	80	82	1	1	64	66	1	1	62	64		
546th	1	0	8	9	1	0	8	9	1	0	8	9		
282nd	15	52	152	219	11	44	157	212	11	43	147	201		
484th	1	1	70	72	1	1	61	63	ı	1	60	62		
504th	0	1	8	9	0	1	7	8	0	1	7	8		
519th	1	0	8	9	1	0	8	9	1	0	8	9		
225th	12	15	181	208	20	0	191	211	19	0	185	204		
821st	0	1	17	18	1	0	16	17	1	0	15	16		
589th	1	1	38	40	1	1	38	40	1	1	38	40		
135th	32	1	95	128	20	. 1	83	104	20	_1	82	103		
TOTAL:	272	145.	1692	2109	189	96	1611	1896	182	93	151	5 179	0	

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Lieutenant Lloyd T. Rugge, 220th RAC was posthymously ewarded the Silver Star for valor while flying an Orl visual recommaissance mission near Duc Pho, 26 Jan 67. On arrival over a friendly unit which was pinned down by sniper fire, Lieutenant Rugge saw Viet Cong firing from a trench which he attacked with rockets because of the unacted moquest of the ground unit. On his second dive at the hostile position the aircraft was hit and crash limited. While trying to from the wreckage he was fatally wounded by the Viet Cong.

Captain Joseph H. Hodges and SSC Roger M. Putnam both from the 220th Reconnaissance Aviation Company received Silver Stars for while flying near Hoi An on 6 April 1967. Upon hearing a call from another Army 0-1 pilot requesting help in breaking up a Viet Cong ambush they diverted to the scene in their 0-1 which was mounted with an experimental window mounted M-60 Eachine Gun. Once over the target they made five (5) strafing runs on the well; dug-in ambush site before the Viet Cong began to break and run. Positive results of this aption were seventeen confirmed killed, 25 probable killed, and many friendly lives saved.

#### 7. (U) Signal

- a. Communications with subordinate units of this battalion continues to be a major problem area. A great number of man-hours are wasted each day by personnel of all staff sections attempting to place long distance calls to elements of this battalion located throughout I and II Corps tactical zones. The single long range radio organic to this battalion, an AN/CRC-46 which has an operating range of only 43 nautical miles, is of no practical value. Three ARC-102 SSB HF radios designed for airborne use have been procured from salvaged aircraft, modified for ground use, and utilized to supplement the telephone communications. Although this has greatly increased this battalions ability to communicate with subordinate units as well as higher headquarters it is not a satisfactory solution. Improvised modifications to adapt this radio for ground use makes repairs extremely difficult.
- b. The teletype writer Set AN/VSC-2, which has as a component part the AN/GRC-106 SSB HF radio, is scheduled to be issued in the near future to this battalion in limited quantity. It is not anticipated that this radio will greatly improve the communications situation as it has exactly the same characteristics and capabilities as the AN/GRC-46, less the shelter.
- c. During this reporting period the Battalion Communication Section has continued to operate a battalion switchboard to supplement the Qui Thon Local Telephone System because of inadequate telephone service. This switchboard services forty (40) subscribers within the battalion headquarters providing them with access to the Qui Nhon Local, direct long distance service, and hot line communications to 17th Aviation Group Headquarters at Nha Trang and the 131st Aviation Company at Hue Phu Bai.

SECTION II Commander's Observation and Recommendations.

Part I: Observations (Lessons Learned)

- 1. Personnel: None
- 2. (C) Operations
  - a. (C) Item: Use of Airstrikes and Artillery

Discussion: Rany times when conducting a series of sirstrikes on the same target there is a delay between flights allowing the enemy an opportunity to move or regroup during the lull in firing.

Observation: The Army Aviator can initially call in artallery, adjust onto the target, them stop the shelling while the aircraft drops his ordnance. As the close air support departs the area, the artillery can again be called in until the next aircraft is on station. This would insure constant coverage of the target and discourage enemy movement.

b. (C) Item: Use of Radar Vector Bombing

Discussion: Ground concentrations of enemy anti-aircraft weapons often prohibit FAC aircraft from operating in close proximity to air strike targets.

Observation: By giving the attack jet aircraft the frequency of counter mortar radar, the jet can be vectored over target and controlled by the ground radar team with axeellent results.

c. Item (C): Use of Specific Run in headings for Airstrikes.

Discussion: It has been noted that in some instances airstrike aircraft take more hits when the airborne controller has broadcast the run in heading desired. By broadcasting this information over the air the enemy if on the control frequency, can shift all their fire power toward one specific direction.

Observation: When the situation will permit, the strike pilot should select his own run in heading, thereby preventing the total massing of enemy fire power toward his initial strike direction.

d. (C) Item: Use of delayed Artillery

Discussion: It has been found that during an artillery strike the enemy will seek cover in bunkers, etc.; but that he will leave this sanctuary as soon as the observation aircraft leaves his area.

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Observation: After having conducted artillery fire on a fortified position and it is believed that in all probability there are still beeny left alive, the pilot will tell the artillery battery to load VT and hold for his command. The pilot then departs the area and after traveling about 3 - 5 miles the enemy will emerge from their positions. At this time the command to fire can be given and in all probability the enemy will be caught in the open, thereby suffering additional heavy casualties.

#### e. (C) Item: Defoliation

Discussion: During the months of May and June the 196th Aviation Company conducted several defoliation missions. A spray rig was developed and issued by 17th Combat Aviation Group.

Observation: A thorough recommaissance of the area to be sprayed should be accomplished by both the supported and supporting units. Defoliants should be premixed and ready for loading as soon as the aircraft reaches the staging area. For best coverage the aircraft should be flown at 30 to 40 knots indicated airspeed and 50 to 75 feet above the trees. Gurship support should be readily available or on call.

#### f. (0) Item: Star Light Scope

Discussion: A small scale feasibility study was conducted by the 133d Recommaissance Airplane Company to investigate the capabilities of the Starlight Scope when used in the 0-1 Bird dog. The great number of daylight visual recommaissance missions and the shortage of Aviators during the test period allowed for only seven, two hour, night VR missions during the full moon period in May. These missions were flown along the coast, over populated areas, and along mountain slopes.

Observation: The starlight scope is particularily effective along the coast line. The white sand reflects the available light, making it possible to distinguish small objects along the beach. It is possible to count the number of carlocks on a rowboat from the altitude of 2500 feet. Monitoring moment along highways or in open terrain is relatively easy from the altitude of 2000 feet or below. Camp fires under the jungle campy that can not be seen with the maked eye can be readily detected by use of the Starlight Scope. To accurately plot enemy activity at night the aviator and observer team must be intimately familiar with the terrain and plan the mission carefully. The use of the starlight scope and its night VR capabilities merit additional evaluation.

#### g. (6) Item: Machine Gum, M-60, Wing Mounted

Discussion: During the reporting period the 133d Aviation Company mounted one M-60 machine gun under the wing of ten organic airplanes. An ammunition can with a 600 round capacity is used with this weapon system. The system works electrically and is fired by depressing the aviators trigger on the stick hand grip.

Observation: Aviators of the 183d Aviation Company have used this weapon to great advantage in the visual recommaissance program. This machine gum system proved very effective and has the following uses:

- (1) Marking target at night utilising tracer mammistion.
- (2) Marking target for close support helicopters during daylight operations.
  - h. (C) Item: Armored Seats O-1 Bird Dogs

Discussion: During the reporting period the 183d Aviation Company was equipped with the pilots seating area protected by armor plating. Though this armor provides protection against small arms fire, the increase in the sirplane gross weight, and the interference caused by the seat side plates which prevent full aft left stick deflection, were considered to be justifiable reasons for removal of the seat side plates.

Observation: By removing the armored side plates 37 pounds of weight was removed providing modest improvement in airplane performance. The restriction of movement due to the side plates is suspected to be a contributing factor in one of the company's major accidents on an attempted crosswind take-off.

- 3. (C) Training & Organization
  - (C) Item: Aircraft Utilization

Discussion: Maximum utilization of the company's organic O-l airplanes is not being realized. The airplanes could be flown at least twice the number of hours per month than they presently are being flown, if additional aviators were assigned. For example, the USAF FAC O-l airplanes are being flown approximately ten (10) hours per day compared to our four (4) to five (5) hours a day. As the number of O-l Airplanes in Vietnam decreases it may be necessary that each airplane be required to increase its flying time to afford the same coverage in the visual recommaissance program. At present, the airplanes are being flown according to the aviators physical limitations rather than within the mechanical limitations of the airplane. Even though there are some repair items which prolong down time on airplanes the normal repair parts are readily available and repair crew well equipped and trained.

Observation: Assignment of two (2) aviators per sirplane could provide twice the visual reconnaissance capability of the unit with virtually no increase in assigned aircraft. Modest increases in support personnel and equipment would be required. The assignment of additional aviators would enhance the utilization of the Birddog aircraft.

- 4. (U) Intelligence: Mone
- 5. (U) Logistics
  - a. (U) Item: Procurement of Slings for ROK units.

Discussion: The Capital ROK Infantry Division was lacking in the proper sling material for the 196th to effectively accomplish its mission of resupply. Consequently, through direct coordination with the USA Depot, Qui Ilhon, the necessary sling equipment was made available to the ROK's for issue.

Observation: The proper sling material must be available at the supported unit for a CH-47 helicopter company to effectively perform its mission.

b. (U) Item: Issue and Turn-In of Americaft

Discussion: The 196th Aviation Company arrived incountry with two OH-23 Aircraft. The two aircraft were turned in prior to unit arrival at base camp and a UH-1B was then issued. Shortly after this, the UH-1 w s turned in and two OH-23's were issued.

Observation: The TOLE of this unit indicates two OH-23's as a portion of unit equipment. The LTOE shows two UH-1 aircraft in lieu of the OH-23's. If UH-1's are to be issued the TOLE should be changed to reflect this. This aircraft is utilized for liaison, recommaissance, and as a maintenance aircraft to retrieve and issue parts to aircraft downed in locations other than their maintenance base. A UH-1 is preferable.

- 6. (U) Other
  - a. (U) Item: R & R flights out of Da Nang, RVE

Discussion: The quotas for R & R are given units in I Corps for flights departing Cam Ranh Bay. The requirement for personnel to travel to Cam Ranh Bay imposes a serious burden on the individual, the unit, and the transportation carrier. Personnel must be booked at least a week in advance with the USAF ATCO in order to assure getting them to Cam Ranh Bay on time. Further, personnel must depart a minimum of a day early to arrive at the R & R Center for processing. On the return trip, as many as three days are lost in trying to obtain a flight from Cam Ranh Bay to Da Nang. Another factor to consider is the tramendous increase in personnel making in-country flights. On occasions, members missed R and R flights because they were bumped off the in-country flights by other personnel with higher priorities.

Observation: That R and R flights be scheduled out of Da Nang RVH. Scheduling members of the units in ICorps out of Da Nang would onhance the morale of those units, eliminate the incountry travel time, and preclude no-shows for flights.

#### b. (U) Item: AV/VRC-49

Discussion: The 220th Recommissance Airplane Company conducted a series of tests in an attempt to improve communications by selecting a better antenna for the AN/VRC-49.

Observation: During ground testing the All/VRC-49 antenna was removed from the vehicle and placed on a 55 foot pole. This artenna, when used in conjunction with an antenna coupler, was far more effective than any other pole type antenna tested.

c. (U) Item: AN/APR-25 and AN/APR-26 installation (131st Aviation Company)

Discussion: AN/AFR-25 & 26 wiring harness uses Rayclad #D-132-06 (2) connectors for splicing of wires. When installing the harness it was soon discovered that these splices did not hold. Several splices had to be respliced during installation. Problem continued after installation.

#D-132-06 (2) connectors were not used. Solder connections have proven more satisfactory.

d. (U) Item: Location of AN/APR-25 and AN/APR-26 (131st Aviation Company)

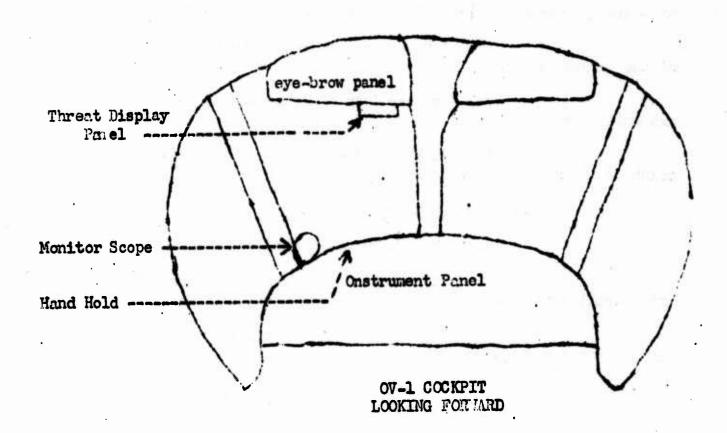
Discussion: The installation plan for the AN/APR-25 and 26, threat display panel, calls for it to be mounted under the pilots left eye-brow panel, and for the monitor scope to be mounted on the left instrument sun glare shield. The threat display panel and monitor scope were designed to be used simultaneously by the pilot so that he could determine type and location of threat. Under the present installation plan, monitoring of both instruments cannot be done satisfactoritly.

Observation: The threat display panel could be re-located to a position on top of the instrument sun glare shield. This will allow the pilot to monitor both instruments at the same time. (See Inel 3).

#### a. (C) Item: Emergency Communication

Discussion: Misuse of the guard channel continues to be a problem. Excessive conversation, not of an emergency nature, is common. Also, excessive testing and/or misuse of the SPX-lil emergency beeper is seriously affecting the advantages of the system. It is not uncommon on a flight to hear the beeper for periods of 60 to 90 seconds.

## PLANNED INSTALLATION Location of AN/APR-25 and AN/APR- 26



Observation: Continued misuse of emergency frequencies and equipment will eventually result in loss of life and equipment.

f. (C) Item: Testing of Decca Mavigation System installed in 0-1 aircraft

#### Discussion:

- 1. Background Decca was first tested in 0-1 aircraft of the 219th Recon Apln Co in January 1967 for approximately eight hours with the following results:
- (a) System was accurate and a great aid in pin-pointing positions over jungle terrain.
- (b) A O.4 error discovered in the transmission of the "green" station.
- (c) Availability of latticed 1:50,000 maps was extremely low.
- (d) Further testing was delayed due to the crash of aircraft with Decca system installed in February 1967.

#### 2. Installation

- (a) Components now installed:
- (1) Antenna on belly of aircraft behind anti collision light.
- (2) Meters observers compartment, left side, mounted on bulkhead at station 61.31.
- (3) Control Panel observers compartment, right side, behind signal distribution muel.
- (4) Receiver in baggage compartment behind observer.
  - (5) Total weight of system 37 lbs.
  - (b) lodifications required for installation:
- (1) Antenna Wiole must be drilled in belly of aircraft, and additional mounts and brackets must be fabricated. Area around antenna must then be sealed.
- (2) Leters Holes must be drilled for mounting.
- (3) Control Panel Holes must be drilled for mounting and a mounting container fabricated.

Y

- (4) Receiver Flatform must be fabricated and mounting holes drilled.
  - (5) Total Man-hours Approximately

40 hours.

- 3. Testing
- a. Pesting period was from 13 June 1967 to 23 June 1967, with a total of 25 hours of flight testing.
  - b. Conditions under which tested and results:
    - (1) Mountainous terrain favorable .
    - (2) Flat, rolling terrain favorable
- (3) Weather Caused Delta mater to give ambiguous indication.
  - c. Hethods of testing and results:
- (1) In routine VR mission, pilot would instruct operator to take readings over prominent feature (ie, road junctions, stream junctions, etc.). Good results were obtained on approximately seventy (70) percent of the test flights.
- (2) Readings were sent to a fire support base with a fire mission to test the systems used in artillery fire missions. First round "fire for effect" rounds were within 150-200 meters of target.
- (3) Operator guided to points on the map, with reference only to latticed maps and Decca meters. These tests proved very satisfactory. An experienced operator can guide the pilot to a six digit grid coordinate.

#### Observation:

#### 1. Advantages:

- a. Very useful over jungle terrain where coordinates are difficult to determine.
  - b. The Decoa system is not affected by mountains.
- c. With the use of Necca, the aircraft remains at suspected or known enemy locations for a minimum amount of time. Once the Decca reading is taken over a target, the aircraft can continue away from the target area until artillery, helicopter gunships, or tactical air arrives. Previously, pilot had to gain altitude and remain in vicinity of the target to get coordinates, making the aircraft more vulnerable and warning the enemy.

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d. The rapidity of fixing target locations embances the element of surprise.

#### 2. Disadvantages:

a. Dependent upon his experience with the Docca; the observers attention to the meters and cross checking for proper operation of the system can detract from 25 to 50 percent of his actual Yisual Recommaissance. This imposes a greater requirement on the pilot for sighting targets.

b. The Decca "Delta" meter is affected by weather and will give ambiguous readings. Only by knowing his location on the map, can the observer second guess the meter.

c. In order to supply adequate power for zeroing prior to take-off, aircraft RPM must be at least 1500. This must
be done in the take-off position, because once the RPM gets nelow
1500 and the aircraft is moving (as in taking) the Decca gets out of
zero, resulting in inaccurate readings. Meters can be re-zeroed in
flight but this is a difficult operation.

d. In their present configuration, the meters are difficult to read accurately.

Suits.

were obtained in VR areas 3A and 1B (mmp sheets 5536 IV and 5537 III). It is suspected that the hand drawn lattice on these maps is incorrectly plotted. The majority of bad readings were obtained in these areas.

f. (U) Item: Wearing of Fare Proofed Flight

Discussion: On 10 May 1967, the 18th Aviation Company had an aircraft accident occur at Da Mang. As the aircraft struck the ground it burst into flames; the results being that one pilot suffered second and third degree burns and is presently still hospitalized. The other pilot suffered first and second degree burns and required sixty days hispitalization. Both pilots were wearing standard issue jungle fatigues with the sleeves rolled down and gloves on. This uniform gave absolutely no protection except for the skin area covered by gloves and boots.

Observation: Aviators should be allowed to fly in the standard issue flight suit to preclude such needless injury. The flight suit was designed and treated for the purpose of flight and should be utilized as such. Uniformity in the wearing of the Army uniforms should be regarded as secondary.

g. (C) Item: Use of 18" lens for VR effectiveness (131st SA Company)

Discussion: To further increase the effectiveness of the VR's photographic capability the unit obtained an 18" lens come to use in lieu of the 3" and 6" lens comes.

Observation: This has enabled photography of areas that were too hot for lower altitude photo runs and has added in keeping the hit rate low.

h. (C) Item: Increased successfulness of SLAR mission (131st SA Company)

Discussion: The SLAR missions in the Tally No area have been highly successful during this reporting period in inflicting damage to vehicular movement, truck parks and storage areas.

Observation: A technique which has caused the increase in successful strikes is for the strike aircraft to be placed on the same radio frequency as the SLAR aircraft. Once the strike aircraft checks into the area, the Airborne Control Center turns him over to the SLAR aircraft for target description and location. Use of this method results in less time between the moment the targets are found by SLAR and the strike on the target. Another advantage is that the SLAR pilot is able, to keep abreast of the latest activity in the area from the cockpit imagery readout and thus may inform the fighter aircraft of a more lucrative target. The substantial increase in bomb damage assessment has proven this method to be successful. Currently there are twenty five to thirty strikes conducted per week.

1. (C) Item: Use of VRS-4 Infrared System (131st AS Company)

Discussion: Use of infrared in cloudy or wet weather is hampered for two reasons. First, the low altitude required by the IR aircraft makes the flight extremely hazardous in mountainous terrain; this is compounded in poor weather. Secondly, wet weather (fog, showers, clouds) will screen out most or all indrared radiation before it can be detected by the IR sensor. A mission flown under those conditions is always unsuccessful and is a waste of aircraft and pilot assets.

Control of the weather in the mission area is such that it impairs the capabilities of the infrared sensor.

#### Part II Recommendations:

- 1. (C) Personnel: None
- 2. (C) Operations:
- a. (C) Item: Reference Section II, Part I, Para 2 (I), Starlight Scope.

Recommendations: That emphasis be placed on the use of the Starlight Scope and that the 133d Recommaissance Airplane Company continue testing this devise. Future testing should be to determine the ratio of significant sightings to the number of night flying hours. A comparison of this ratio to the daylight ratio should be indicative of the value of this system.

b. (C) Rtem: Reference Section II, Part I, Para 2 (L), armored seats, O-1 Bird Dogs.

Recommendations: That O-1 Recommaissance Companies not install side plates on armored seats because of the weight penalty and restriction of control travel.

- 3. (U) Training and Organization
- a. (U) Item: Reference Section II, Part I, para 3 (a), Aircraft Utilization.

Recommendation: That a study be conducted to determine the number of aviators to be assigned to an 0-1 company to effect maximum utilization of its organic airplanes. If the ratio of aviators to airplanes were two to one, this would enable each airplane to be flown approximately eight hours per day and each aviator 120 hours per north. This would allow ample crew rest.

- th. (U) "Intelligence; None
- 5. (U) Logistics:
- a. Reference Section II, Part I, para 5 (b), Issue & Turn-in of aircraft.
- b. Recommendation: UH-1 Type helicopters should be issued to a medium helicopter company to be utilized as a liaison/recommaissance and maintenance aircraft.
  - 6. (U) Other
    - a. Item: Reference Section II, Part I, para 5, R & R Flights

Recommendation: That personnel of those units in I Corps be scheduled out of Da Hang for Rick R Flights.

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b. Item: Reference Section IN Part I, para 6 (d), Location of AN/ARR-25 and AN/APR-26.

Recommendation: The threat display panel be moved to a position on top of the instrument sun glare shield.

o, Item: Reference Section II, Part I, pasa 6 (f), Testing of Decca Navigation System installed in 0-1 aircraft,

Recommendation: 1) Reference disadvantage is Recommend either index marking needles be attached to meters so that the operator can mechanically track needles and use the index needle to mark meters when over a target, or, install digital meters which could be mechanically stopped by operator and show both Decca readings and six digit coordinates. 2) Reference disadvantage 51 Recommend the hand drawn lattice maps be inspected for accuracy, Possibly a machine plotted map would increase the accuracy, 3) Recommend plastic door over meters be removed. This has been accomplished on the aircraft used for this testing.

2 Ting Withdrawa at Hac De

JOHN H. RICHARDSON
LTC, Artillery
Commanding

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AVGD-SC (12 Aug 67)

SUBJECT: Operational Report for Quarterly Period Ending 31 Jul 67

UIC WDLKAAK, RCS CSFOR 65.

HEADQUARTERS, 17TH COMBAT AVIATION GROUP, APO 96240 25 Aug 67

TO: Assistant Chief of Staff For Force Development, Washington D.C. 20510

- 1. (U) The 225d CSAB Operational Report for Quarterly Period ending 51 Jul 67 is forwarded for information and action as necessary.
- 2. (U) This headquarters has reviewed this ORLL and concurs with the report as modified herein.
  - 3. (C) Reference Section I. Significant organizational activities.
- a. Reference para 7a, the reorganisation of the 212th and 225d Aviation Battalions will decrease telephone communication problems to subordinate units. A sole-user telephone circuit has been approved between 225d Aviation Battalion and the 225th Aviation Company. It is programmed to be in service 25 Aug 67. The 225d CSAB can reach the 219th and 185d Aviation Companies through existing 17th Aviation Group sole-user circuits. Communication to the 185th Aviation Company will continue to be a problem area.
- b. Reference para 7b. The AN/VSC-2 will increase the communication capability of the 225d Aviation Battalion when they are available. Distance capability listed in TM is very conservative.
- 4. (U) Reference Section II, Part I, para 6a. This Headquarters has requested R&R flights for that portion of the 17th Avn Gp stationed in the I Corps Zone. The original request was to commence in September 67, but to date the allocations are still scheduled for Cam Ranh Bay. Future requests for allocations out of Da Nang will be made.
- 5. (C) Reference Section II, Part II, para 2b. The problem should be met by modification of the side plates or of the control stick, not by doing away with protective equipment.

FOR THE COMMANDER:

l Incl

LTC, CE Adjutant

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AVFA-GC-OT (12 Aug 67) 2nd Ind SUBJECT: Operational Report for Quarterly Period Ending 31 Jul 67 UIC WDLKAAK, RCS CSFOR 65

HEADQUARTERS, I FIELD FORCE VIETNAM, APO 96350 14 Sep 1967

TO: Commanding General, 1st Aviation Brigade, APO 96307

Concur with the observations and recommendations of the basic document as modified by the 1st Indorsement.

FOR THE COMMANDER:

s/B. L. Chenault t/B. L. CHENAULT 2LT, AGC Asst Adjutant General



AVBA-C (12 Aug 67)

SUBJECT: Operational Report for Quarterly Period Ending 31 July 67

UIC WDLKAAK RCS CSFOR 65 (U)

HEADQUARTERS, 1ST AVIATION BRIGADE, APO 96384

30 Sep 1967

THRU: Commanding General, US Army Vietnam, ATTN: AVHGC-MH, APO 96375 Commander in Chief, US Army Pacific, ATTN: GPOP-MH, APO 96558

TO: Assistant Chief of Staff, Force Development, Department of the Army (ACSFOR DA) Washington, D.C. 20310

- 1. (U) This headquarters has reviewed subject report of the 223rd Combat Support Aviation Battalion, considers it to be adequate and concurs with the contents as indorsed.
  - 2. (C) The following additional comments are considered to be pertinent:
- a. Reference Sect I, Par 7b, pg 11: Non-concur. The AN/VRC-2 radio teletype, which uses the AN/GRC-106 HF/SSB radio, is much superior to the AN/GRC-9, which was the basic AM radio set used in the AN/GRC-46. The range of this set, using nominal ground wave propagation, is only about 50 miles. However, using sky wave propagation, the range is extended considerably. This depends on the antenna and frequency.
- b. Reference Sect II, Part I, par 2f, pg 13: Concur. The Army Concept Team in Vietnam (ACTIV) continues to experiment with and evaluate night observation devices from the aerial platform, Improved night vision devices are being evaluated by selected 1st Aviation Brigade units. Distribution of night observation devices will be made available as they are approved and a BOI established.
- c. Reference Sect II, Part II, par 5, pg 22: Concur. MTOE action has been initiated for all assault support helicopter companies. This MTOE action will replace OH type helicopters with UH-1 type aircraft. It is mandatory that these aircraft be assigned to reduce the flying hours of CH-47's devoted to administrative and maintenance missions. In addition, the CH-47 will be used to transport 4-6 man pathfinder and/or liaison teams and equipment to assist supported unit in rigging of cargo. This headquarters recommends favorable consideration of the requested MTOE.
- d. Reference Sect II, Part II, par 6c, pg 23: Non-concur. Decometer neelde movement can be stopped simply by depressing the reset R knob and the coordinates can be copied. The need for complex medifications is not deemed appropriate at this time. Scale 1:50,000 latticed maps have been requested by the USARV DECCA Project Office.

FOR THE COMMANDER:

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Declassified after 12 years
TO DIR 5200 16

CONFIDENTIAL :/LEWIS T. TURNER
Captain, AGC
Asst Adjutant General

AVHGC-DST (12 Aug 67)

SUBJECT: Operational Report-Lessons Learned for the Period Ending 31 July 1967 (RCS CSFOR-65) (U)

HEADQUARTERS, UNITED STATES ARMY VIETNAM, APO San Francisco 96375 2 NOV 1967

TO: Commander in Chief, United States Army, Pacific, ATTN: GPOP-OT, APO 96558

- 1. (U) This headquarters has reviewed the Operational Report-Lessons Learned for the period ending 31 July 1967 from Headquarters, 223d Combat Support Aviation Battalion (DLKA) as indersed.
  - 2. (C) Pertinent comments follow:
- a. Reference item concerning testing Decca Navigation System, page 23, paragraph c and 3d Indorsement, paragraph 2d.
- (1) Nonconcur with recommendation one concerning modification of Decometers. Needle movement can be stopped by depressing the reset knob to facilitate coordinate recording.
- (2) Concur with recommendation two concerning the requirement for machine printed, scale 1:50,000, latticed maps. These maps have been requested by the Decca Project Officer.
- (3) Nonconcur with recommendation three concerning the removal of the plastic door covering the Decometers. These sensitive instruments must be protected from dust and dirt in order to guarantee continued accurate functioning. Those covers that have been removed should be replaced without delay.
- b. Reference item concerning wearing of the fire proofed flight suits, page 20, paragraph f. Concur in the requirement for flight clothing which provides protection in the event of fire. USARV Regulation 385-50 states that either fatigues or flight suits will be worn by flight crewmembers. The cited restrictions on the wearing of flight suits are command prerogatives exercised by commanders at headquarters other than USARV. Philadelphia Depot advises that 34,450 two piece Nomex flight suits are being prepared and will be shipped to RVN. Input starts in January 1968; above total will be completed in July 1968.

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AVHGC-DST (12 Aug 67)

SUBJECT: Operational Report-Lessons Learned for the Period Ending
31 July 1967 (RCS CSFOR-65) (U)

- c. Reference item concerning teletype set AN/VSC-2, page 11, paragraph 7b and 3d Indorsement, paragraph 2a. Concur in the comments made by the 1st Aviation Brigade in the 3d Indorsement. The capability of the new AN/VSC-2 is incorrectly stated by the 223d Combat Support Aviation Battalion. The AN/GRC-106 HF/SSB radio, a component of the AN/VSC-2 is far superior to the AN/GRC-46 and should prove an excellent replacement of the existing equipment.
- 3. (U) Unit will be notified of actions and comments by routine indorsement which returns this report.

FOR THE COMMANDER:

2 Incl

C. S. NAVATORASA

Captam. ACC

Assistant Adjutant General

c.c. HQ, 223d Combat Spt Avn Bn HQ, 1st Avn Bde GPOP-DT (12 Aug 67)

5th Ind (U)

SUBJECT: Operational Report for the Quarterly Period Ending 31 July 1967 from HQ, 223d Combat Support Aviation Battalion (UIC: WDLKAA) (RCS CSFOR-65)

JAI THANKS MIND

HQ, US ARMY, PACIFIC, APO San Francisco 96558 5 DEC1967

TO: Assistant Chief of Staff for Force Development, Department of the Army, Washington, D. C. 20310

This headquarters has evaluated subject report and forwarding indorsements and concurs in the report as indorsed.

FOR THE COMMANDER IN CHIEF:

RAVRIN

CPT, AGC

1 Incl

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